

A POLICY
OF
RURAL EDUCATION

BY

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WITH A FOREWORD BY

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FOREWORD.

Mr. Fremantle has kindly asked me to write a foreword to his 'Policy of Rural Education.' This I gladly do; for, without subscribing to all his views, I consider that he is doing a public service by stimulating interest and inviting discussion on a subject which is far from receiving the attention it deserves. The rural pupil is at present the Cinderella of our educational system, and Mr. Fremantle wants to see this reproach removed.

Every branch of education has its champions and its custodians. College education is under the ægis of our University, where our ablest citizens are alert to improve and extend it. Secondary education in our high schools attracts steadily increasing streams of private generosity. The demand for technical education, though sometimes uncertain of its goal, presses on apace. And primary education, free or compulsory or both, has had powerful advocacy. But the bias has always been unconsciously urban. Ask the ordinary man what the village school is going to do for the country youth; and the reply is a vague impression that the young rustic will learn

Now, it is possible that the three R's may add to the happiness of the young cultivator; indeed we must hope that they do, for otherwise much labour has been spent in vain. But they have their dangers: the attractions of the city school and the clerk's desk lie behind them; and instead of happiness they may bring restlessness and discontent. Even if this does not follow, do the three R's in themselves make the cultivator a better man at his trade? Do they help him to grow two grains of wheat where one grew before?

This is the question which Mr. Fremantle wants us to answer. If our rural education does not effect these purposes, it is a barren gift. If it tends to uproot the rising generation from the soil, it is an evil. The remedy is one of the most urgent and vital of our educational problems; and we want all thinking men to set to work on its solution. There are those who doubt whether Cinderella can be transformed into the Beautiful Princess by the magic of school gardens and science primers. It is a case for cautious experiment. We dare not dogmatise about

the human child. But Mr. Fremantle gives us food for thought and a definite project for trial. His suggestions may be cordially commended to the district boards and other authorities whose duty it is to guide the great forward move in primary education.

In this pamphlet there is one passage which has my particular sympathy. It is towards the end, where the writer enlarges on what has yet to be done to advance our rural prosperity. Since the days when Sir Edward Buck first lit the torch of agricultural reform, it has been carried on by a small band of enthusiasts. But it has never fired the popular imagination, and its flame has too often been dimmed by other and showier illuminations. Out of the 'beneficent gifts which have flowed from our public exchequer in its good years, if a tithe could have been spared for the development of agriculture and its kindred crafts, much would have been achieved which is now only an ideal. If these neglects can be remedied by a keener interest in rural education, and by saner methods of imparting it, that argument alone will be conclusive in its favour. But it is only one of the many convincing arguments which Mr. Fremantle has brought out in his lucid and stimulating appeal.

JAS. S. MESTON.

1st September 1915.

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A POLICY OF RURAL EDUCATION.

I.—ON EDUCATIONAL PRINCIPLES.

Canon Scott Holland, in a striking pamphlet recently issued "The Call of Empire," points out that while the normal Englishman (using the term for convenience sake as equivalent to Briton) has a genius for administration, for he sees clearly the job before him, understands it, and does it conscientiously, he appears in quite another light when it is a question of providing for the intellectual needs of a country. "Education," he says, "with us is always something of a forced process. It is not our instinctive craft.....intellectual interests are rather remote and never come quite natural to us. We try to do our duty and to supply the educational plant but we show no genius in applying it.....We have not the sympathetic sensitiveness to appreciate the changes required in our system by this or that racial or climatic characteristic.....We are never successful in entering into other people's minds because we are perfectly satisfied with our own and do not wish to travel outside them. It is just this temper of intellectual self-sufficiency which gives us

all our power in practical affairs. At the earlier stage of keeping order and making roads and drains it was all to the good. It told. But now that intellectual interaction is needed, this same temper bars the road ; it shuts us up to ourselves ; it binds us to the mental differences which vitally matter."

Matthew Arnold in "Culture and Anarchy " condemns the popular worship of material progress which he calls the 'machinery of life ' and he pleads for that culture " which believes in making reason and the will of God prevail, believes in the study and pursuit of perfection." He also comments on our preference of doing to thinking. "We show," he says, "as a nation laudable energy and persistence in walking according to the best light we have, but are not quite careful enough, perhaps, to see that our light be not darkness." This is only another version of the old story that energy is our strong point and favourable characteristic rather than intelligence.

This phase of the national character has been recently exemplified by the way in which our leaders have allowed us to drift into the biggest war of history. They did not think out and clearly define a national policy nor did they make any proper attempt to provide armaments to suit such policy as we had.

In India there is so much work always to our hand and there are so few persons of the leisured and cultured classes that we have more than our share of the men who act and less than our share of the men who think.

Possibly it is for this reason that though we are aware that etymologically education means training, and though we accept the definition of education as the training of the faculties we are yet apt to confound education with literary instruction. We entrust its administration to a 'Director of Public Instruction' and we use as the vernacular equivalent the word '*ta'lim*' which means 'the imparting of knowledge.' The attempts now being made in higher grade schools to cultivate the intelligence of pupils and to develop their moral and physical capacities rather than to fill their brains with facts are considered beyond the capacity of the ordinary teacher and therefore as a luxury rather than as an essential part of any education worthy of the name. In pedagogic circles such attempts are still called 'the new method of teaching' whereas it is nearly 100 years ago since Fröbel, the founder of the Kindergarten, first advocated their use. It may perhaps be as well to recall something of that great man's words. In advocating the development of the moral and physical sides of the boy's nature he says: "It is

futile to object that the boy if he is to reach a certain degree of skill and insight ought to direct his whole strength to the learning of words, to verbal instruction, to intellectual culture. On the contrary genuine experience shows that external physical productive activity interspersed in intellectual work strengthens not only the body but in a very marked degree the mind in its various phases of development so that the mind, after such a refreshing work, enter upon its intellectual pursuits with new vigour and life."

And in speaking of the intellectual side of instruction he says : "It is through the observation and analysis of his surroundings and of the workings of nature that a boy is led to observe, to think and to reflect."

These principles are fundamental, they apply in every age, in every clime and to every form of institution.

II.—THE SYSTEM IN ENGLAND.

One can hardly be surprised at the small degree to which these principles set forth above are even now accepted in India when one sees how little they still affect the system of education actually in force in the British Isles. When learning was confined in great part to the professional classes whose needs were almost entirely literary and to the aristocratic classes

whose love for sport and action in their homes obviated all danger of one-sided development, it was perhaps natural that the literary side of school education should be so prominent as to exclude other sides ; while the desire of those of the lower classes who by natural ability, ambition and good fortune were able to acquire some education was to rise out of their sphere to that of the professional class and for this the literary education imparted fitted them fairly well.

But when forty years ago elementary education became compulsory for all classes of the population it seems not to have occurred to any one that anything different was required. And it is only by very slow degrees that a change is being effected. The present system is almost universally condemned by authorities on the subject. Take first Sir John Gorst who said in November 1911 : " We are spending millions.....on what is called education. The majority of those who care for the welfare of the people and are experts in education are of opinion that the greater part of this money is, under the present system, wasted and might as well, so far as education is concerned, be thrown into the sea." Mr. E. Holmes, the Chief Inspector of Elementary Schools and the author of " The Tragedy of Education," does not stop at declaring the education to be useless :

he declares that it is positively harmful. "The education given in thousands of our elementary schools is then in the highest degree anti-educational To say that elementary education as it is given in such a school tends to arrest growth is to underestimate its capacity for mischief The result is that the various faculties which education is supposed to train become irretrievably starved and stunted." Another witness, Alexander Paterson, who in his book "Across the Bridges" has made a close study of the mean streets of South London, says : "At our elementary schools we seem to aim at producing a nation of clerks, for it is only to a clerk that the perfection of writing and spelling attained is a necessary training. Our syllabus is not merely a general introduction to life : the skill and enthusiasm of the teacher has made the three R's a science in themselves and what was meant to be the elements of knowledge has become a specialised technical training for the rather dubious career of the city clerk."

The Poor Law Commissioners were of the same opinion. They say, "Our expensive Elementary Education system (costing £20,000,000 annually) is having no effect on poverty, it is not developing self-reliance or forethought in the characters of the children and is in fact persuading them to be clerks rather than artisans."

And what is the verdict of the country side? Mr. Charles Bathurst, M.P., Secretary of the Central Land Association, in a paper read before "The Prevention of Destitution Conference" in 1912, said that in many parts of the country no man under fifty was to be found who had any real skill in laying a hedge, thatching a rick, using a scythe, shearing a sheep, or milking a cow, and he pointed out that estate carpenters and workmen were increasingly difficult to obtain though high wages were offered. Mr. H. Harber, from whose book "Rural Problems" the above extract is taken, goes on to say: "Not only is this undoubtedly so but any countryman who complains of it, whether he be the squire of the village or the sixteen-shilling labourer, ascribes it directly to the existence of the village school. Too much education has resulted in complete incapacity for the everyday work of the country. It is a striking comment on our rural schools."

Thus neither in urban nor in rural schools is there as a rule any attempt at training for the life's work. Great efforts have, it is true, been made to make up this deficiency by voluntary evening continuation classes, but these also are of too literary a character. In any case they only appeal to a small section of those affected nor can continuation classes do much good unless they are co-ordinated with the general

industrial and agricultural life of the country and unless the co-operation of employers is secured. By far the greater portion of the juvenile population grows up unskilled, and attracted by the independence and comparatively high wages offered to boys in blind-alley employments refuses such opportunity as may present itself of learning a trade and goes eventually to swell the large class of unskilled labourers.

III.—THE SYSTEM IN INDIA.

Such is universal education in England and such is the result of confining it to purely literary subjects. And it is this system which we are now seeking to apply to our Indian Empire. The extent to which a literary course prevails in all forms of education in India is well shown by the Quinquennial Review of Education in India for 1907—1912, which draws the following significant contrast with Japan :—" In that country only 2·6 per cent of the (primary) school population proceed to a literary course while nearly 5 per cent proceed to technical or specialised courses : in India the answering percentages are 12·4 and 0·5." The educated classes migrate from the country to the towns and a boy when he has once gone to school to learn English is never willing to return to live in his ancestral village. The "Bengalee," the organ of Mr. Surendranath Banerjee, bewails the dissolution of

the old prosperous village life and ascribes is to the desertion of the villages by the educated and well-to-do sections of the people. For the School-leaving Certificate in the U. P. one of the subjects that may be taken up is agriculture, but there is no course of practical agriculture available in any school. As far as vernacular education, even up to the vernacular final standard, is concerned it is exclusively literary both in urban and rural schools. There is no course of scientific instruction even on the theoretical side and for the two classes of schools the text-books are identical. The rural schools stand completely apart from village life and there is no attempt to bring the instruction and the times and seasons at which it is given into touch with local agricultural conditions. Except for casual holidays which bear no relation to agricultural seasons the boys sit in school morning and afternoon every day for ten and a half or eleven months in the year, two or three weeks' holidays being allowed generally but not universally at the two harvest times.* The secondary vernacular schools (misnamed 'town schools') even follow the English schools in the towns by having their vacation in June, a month when agricultural operations are at a standstill, although a majority of the boys are sons of agriculturists. The modern zeal for 'efficiency' is

* In the U. S. A. the average number of school days is only 144.

intensifying the evil. In order that purely literary education may (as in the South London schools) be perfected in primary schools, it is proposed in the interests of efficiency to collect boys into central schools where the large number of pupils, 200 or more, allows of one teacher being allotted to each of the six classes. This means that many will have considerable distances to go and will be kept away from home from early in the morning till late in the evening, that personal relations between teacher and parent cannot be established and that the school can never be a village institution. Inspection will be facilitated and all the schools will be on a sealed pattern sent out from the departmental head-quarters in the nearest big city. Under such circumstances the interests of the villagers themselves cannot be aroused and the chance of the school ever taking the place which it should do in rural life is very much lessened.

Now the full force of the results of the system above described is not yet apparent because over the greater part of Northern India at any rate education has as yet reached only the hereditary literary classes. It is true that there are a considerable number of boys in the schools belonging to the cultivating classes, but with few exceptions they leave before they reach the U. P. standard, and the number of boys who after passing that standard

remain in the villages is very small indeed. In the quinquennial review it is stated that it is a most remarkable fact that out of every five pupils in India who complete the upper primary stage no less than four go on to a secondary school, and this takes no account of those who go on to patwari schools or other specialised institutions. Thus a very small residue is left of those who are content to reach the point laid down as the limit of primary education and to stop there. Now however that funds for a large extension of schools are available, and the professed object is to raise to this level of literacy a large proportion of the boys of the cultivating classes, it is quite time that attention were called to the defects of the present system and a real effort were made to develop it in such a way as to conform more nearly to rural needs.

It is true that to a certain extent these matters are beginning to receive recognition. In the Government of India's great resolution of March 1913 the subject is dealt with thus : " It is not practicable at present in most parts of India to draw any great distinction between the curriculum of rural and urban primary schools, but in the latter class of schools there is special scope for practical teaching of geography, school excursions, etc. Nature study should vary with the environment and some other

form of simple knowledge of the locality might advantageously be substituted for the study of the village map. As competent teachers become available a greater differentiation in the courses will be possible. In the ordinary elementary schools formal agriculture is not taught, but in some provinces a markedly agricultural colour is given to the general scheme of education." And in the quinquennial report mentioned above for 1907—1912 we find one of the cardinal principles of policy stated thus : " The scheme of primary and secondary education for the average scholar should steadily, as trained teachers become available, be diverted to more practical ends, *e.g.*, by means of manual training, gardening, outdoor observation, practical teaching of geography, school excursions, organised tours of instruction, etc."

But these are pious aspirations and as yet little indeed has been done to give effect to them. In the primary and secondary vernacular schools of this province there is no manual training, no gardening or outdoor observation. There are no school excursions or organised tours of instruction. The failure to attempt any of these things is put down to the lack of supply of trained teachers. But no attempt is being made to provide training of the kind required. Primary school teachers are almost invariably villagers : some come from real agricultural

castes and nearly all have some connection with agriculture. The proper material is to hand, but what of the training? A boy goes from his village school where he has been used to sit all day at his lessons and the teaching is wholly literary to the secondary school where again the teaching is wholly literary and his whole time is taken up in preparation for the vernacular final examination. On passing that, if accepted for the teaching profession, he receives such officiating posts as may be vacant and after a time proceeds to the normal school or local training class. Here he continues his literary education and in addition receives instruction in the theory and practice of teaching. But though the vast majority of the students in these institutions are destined for rural schools there is no attempt to train them to supply the needs of rural education. None of these training schools have gardens and nothing is done to teach the elements of the agricultural sciences or even to interest the students in the mysterious processes of nature. An elaborate syllabus of observation lessons and nature study for elementary schools is provided but cannot be taught by the teachers because they have been given no scientific training.* And again no serious effort is being made

* In one province there are special teachers in the normal schools for nature study and in the U. P. an attempt is now to be made to introduce botany into these schools, but it is only a small proportion of the teachers who can be trained in normal schools. ,

to give an agricultural colour to the general scheme of primary education. Reading books are the same in rural as in urban schools, and among the multitude of text-books no arithmetic specially adapted for rural schools has been brought out.

IV.—IN OTHER COUNTRIES.

It has already been pointed out that in the failure of the educational authorities in India to adopt education to the after-life of the student they are following in the steps of the Educational Department in the British Isles. Other countries however have been more progressive. In Germany the function of the elementary school (or Volks schule) is defined to be "to train up the young in religion, good conduct and patriotism by education and teaching and to instruct them in the general knowledge and requirements of civil life." Germany too has taken up vocational instruction with characteristic thoroughness and has in some urban areas a very complete system of continuation schools, fitting the boys for their career in life. The excellent work of the continuation schools in Munich under the able direction of Dr. Kerchensteiner has been recently described in a report submitted by Mr. J. C. Smail to the London County Council entitled "Trade and Technical Education in France and Germany" and in a more

popular manner by Best and Ogden in a pamphlet entitled "The problem of the continuation school and its successive solution in Germany : A consecutive policy." It is from these two works that the following description is taken :—

Every boy in Munich between the ages of fourteen to eighteen (or seventeen should his apprenticeship only last three years) must attend in the daytime some school belonging to the continuation school system, unless he is already at one of the higher schools which prepare for the Universities and official and learned professions generally. According to his trade, he attends the special trade school instituted for members of his trade alone. There are schools for every trade which can provide more than twenty pupils between the age limits mentioned above, trades with smaller numbers being grouped with a kindred trade. The schools are all entirely free. Each is managed by a Committee representing the trade, the municipality and the school. About half the cost is borne by the municipality : but in other parts of Germany the State usually contributes one-third. The boys attend for an average of about eight hours weekly, either during one whole day, or usually twice for half a day. With seasonal trades the time is varied. The employers are obliged in every case to allow the time, and, though this at first met with,

it is reported, some opposition, every one has long become converted by the excellent results, and the employers themselves are amongst the most enthusiastic supporters of the schools, many of them making valuable presents of machinery and materials.

Altogether there are 56 trade schools. The subjects taught are, in all trades, drawing, arithmetic and book-keeping, business letters, essays and reading, citizenship, sensible living and hygiene, while practical instruction in workshop, laboratory, shop and garden is an universal and essential part of the training. Of the 56 schools there are some for those boys who have not taken up any skilled trade. In the case of these schools the courses are directed towards a definite training of the boys in their duties to themselves, their families, their employers and the community, and it is said that the inculcation of self-respect and self-restraint which this instruction aims at must prove a distinct asset to the nation's welfare. Among the specialised trades which have their own schools are the various building trades, brass-workers, shoemakers, printers, gunsmiths, bakers, butchers, coachmen, hairdressers, cooks and many others. A similar system less highly developed is in force in Berlin, Dusseldorf and many other German towns and is gradually winning general acceptance. When

it is remembered that the only corresponding institutions in English cities are voluntary evening classes which meet for but $1\frac{1}{2}$ hours weekly and are attended by only some ten per cent of the boys between 14 and 17 it will be recognised how far we are falling behind Germany in fitting the education of the town-bred boy to the work which lies before him.

If this is the case in the towns it will not be surprising to find that we are equally behind hand in the matter of rural education. In Germany, France and especially Denmark attempts more or less successful have been made to fit the work of the schools to the agricultural life of the country, but much more in this direction has been achieved in the United States of America. Mr. C. H. Judd, Director of the School of Education in the University of Chicago, in an introductory note to a recent book by Mr. B. M. Davis entitled "Agriculture in the public school," says: "Agricultural education is the most widely and energetically cultivated form of industrial education in this country at the present time. Federal and local grants have made possible agricultural courses of different grades, and there is a large body of literature relating to scientific agriculture. This development of agricultural education is due, in the first place, to the large number of peoples who are dependent upon agriculture for their livelihood.

Any improvements which can be made in the methods of raising crops or live-stock are of immediate importance to a large body of American citizens. In the second place the economic value of the products of agriculture has made it important for the community at large to organise agencies which shall improve agricultural conditions throughout the country. Even the Federal Government has found it expedient to organise bureaus of investigation, and these bureaus of investigation have naturally come to be centres of educational activity. There have thus arisen organised centres for the collection and distribution of agricultural information. In the third place the social movement which has been carrying the population in a very large measure away from rural districts to the cities has made every one aware of the necessity of developing an educational system that shall make farm activities attractive to intelligent and well trained people. Finally, students of education have come to see that the needs of children, quite apart from the needs of society at large, dictate a greater emphasis upon outdoor experiences. The doctrine that children need to come into contact with nature has been presented in different ways at different times. On the negative side it has been said that children should be taken away from books and from the artificial surroundings of large communities

and should be brought into contact with things and natural laws. This, we are told, can be accomplished best on the farm. Again, on the affirmative side, it has been said that the resourcefulness of the man who is engaged in the various occupations of the farm cultivates breadth of character and initiative in dealing with all the engagements of life. Whatever the terms employed, the professional educator has come to regard the opportunities which are presented in farm life as a valuable means of training children." Mr. Davis' book from which the extracts in the following pages are taken contains an account of the manifold activities of the Agricultural and Education Departments of the Government and shows how their functions are co-ordinated in spreading agricultural education in elementary and secondary schools. The Agricultural Department is divided into eleven scientific bureaus as follows: weather, animal industry, plant industry, forest service, chemistry, soils, entomology, biological survey, statistics, experimental stations and public roads. All these issue bulletins written in popular style which are of use in elementary schools. The Forest Service teaches the schools through lantern lectures illustrating the conservation of forests and through the issue of question papers requiring observations on the growth of trees accompanied by directions for study and the record of the observations made. It also issues instructions for the

establishment of forest nurseries for schools. The Bureau of Plant Industry has for several years carried on experiments in school gardening and sent to schools throughout the country special packages of vegetable and flower seeds accompanied by circulars containing directions for planting and care of school gardens. It also furnishes for $1\frac{1}{2}$ dollars sets of samples of seeds of economic and wild plants arranged in glass bottles. Another of the activities of this department is the organisation of Boys' Agricultural Clubs, and this is in many quarters regarded as the most successful method of introducing the study of agriculture into the schools. These clubs are worked as follows:—

A number of boys agree each to plant an acre of corn and subscriptions are raised from which prizes are allotted for the best produce. The boys are supplied by the Agricultural Department with circulars of instruction and information in regard to preparation, fertilisation, cultivation, seed selection. "Such circulars are discussed at a club meeting or in school. They lead to further study of farmers' bulletins and books. A boy will profit much from such lessons, discussions and books because he is making practical application of the principles taught. He learns scientific agriculture because he needs it, not because it is scientific The object of

the boys' demonstration work is the same as that among men, namely, better methods of farming and greater yields at less cost. Many of the boys in the clubs who begin to study agriculture in this way will continue to such efforts on their farms, all of them will make useful and more effective citizens." The work of these clubs is most popular and is extending fast. They are now being used for the introduction of new seeds. "In one year," we read, "the value of Canadian oats for Delaware county was demonstrated by the boys and oat production in the county was greatly improved."

Another section of the Agricultural Department called the Bureau of Experimental Stations is in charge of Farmers' Institutes and extension work. It prepares and publishes statistics, courses of study, circulars of information, etc., relating to agricultural education. It also aids State and local school authorities in organising agricultural courses, and securing competent teachers and in movable schools of agriculture hold courses for country school teachers in which the subjects taught are nature study, the management of school gardens and grounds and sanitation. As the result of propagating ideas of this nature the interest of the country at large in extending agricultural education into the elementary and secondary schools has been largely aroused. In

a number of States the teaching of elementary agriculture has been introduced into the ordinary schools. In other States it is being introduced as qualified teachers become available and the supply of such teachers is increasing fast, for during 1909-10 of 137 State normal schools 87 were giving some instruction in agriculture. In the 52 for which information is available 30 made the course compulsory and 22 optional, while of those not giving direct instruction in agriculture 37 gave it incidentally in connection with botany, nature study, or some other course in science, and nearly all those giving courses in agriculture also gave some attention to the subject in other science work, particularly in botany, or nature study. It will be seen from the above that normal schools are rapidly introducing agriculture. Many of those which have not already done so are preparing schemes for the purpose and many are in their turn waiting to secure competent instructors. "Much therefore is being done in the normal schools to satisfy the demand for trained teachers in agriculture. But perhaps still better results may be obtained by the readjustment of the science courses in normal schools to give them an agricultural bend." Agricultural botany and agricultural biology are subjects frequently taught and an agricultural colour is given to nature study, the course in which is said

to form an adequate preparation for a teacher to give such agricultural instruction as will meet the needs of rural schools and at the same time enables a teacher to make use of school gardening and other practical or economic phases of the subject in city schools.

In the elementary schools themselves the teaching of agriculture by means of text-books which has been attempted in some places is not considered to be a sound system. "About all," we are told, "that may reasonably be expected of the teaching of agriculture is to interest the children in country life subjects so that they may know the common birds, insects, trees and weeds, the meaning of some of the best farm practices, such as selecting and testing seed, the way the soil holds water and the means by which to prevent its loss, the care of milk and value of its fat contents, etc. ; and through such studies to lead the children to appreciate the fact that there is something worth while in the immediate world in which they live." To all institutions of this kind the school garden is a valuable and indeed indispensable auxiliary. But the second line of development of agricultural education in the elementary schools, *i.e.*, through the medium of the boys' agricultural clubs already mentioned is said to produce still better results. This is partly because experience in managing these clubs has given the teachers some insight

into the methods of adopting the subject to the needs of the school work.

Interest in agricultural education has by a natural development spread to the secondary schools. Prior to 1907 there were under one hundred high schools giving instruction in agriculture, while in 1910-11 incomplete data indicated as many as 1,500 besides 144 agricultural high schools. The recent tendency of development is towards the utilisation of existing high schools to give agricultural education rather than towards the formation of special agricultural schools. The State Agricultural Colleges also play their part by organising departments of agricultural education, by conducting summer schools for teachers and by various forms of extension work. "Through farmers' institutes, farmers' conventions, farmers' excursions to the college, instruction trains, demonstration farms the man on the farm is having the college brought to him." Large number of leaflets and extension bulletins are published. For instance "The extension bulletin of Ohio State Agricultural College is printed in editions of from 10,000 to 20,000. The mailing list is made up anew each year from responses to notices that names will be dropped from the mailing list unless requests are renewed. Pupils of the public schools are expected to carry on some work suggested by the college

and report upon this work in order to receive the bulletins regularly. In this way the extension department is kept in close touch with the teachers and pupils of the State. The bulletin serves several purposes: it is a means of communication between the college and the schools; it presents various phases of agriculture of interest to the pupils; it assists in organising agricultural clubs among the public-school children; it is the organ for promoting interest in rural school improvement, such as consolidation of rural schools and beautifying school grounds."

Such are some of the many forms in which agricultural education is making head in America. A system of education is being devised suitable to the boy on the farm and the agricultural department is getting into touch with the farmer largely through the schools. And nearly the whole of the advance has been made during the last ten years.

There seems to be nothing in Indian conditions which would preclude an advance being made in some of the many directions indicated above.

V.—CONCLUSION.

The early training of the child, Plato tells^a us, is "the most important stage towards the happy consummation of the excellence of which its nature is capable." The object of education in fact is to

develop capacity, or in other words to foster growth. The defects in the British system of education are as pointed out in Chapter II generally recognised both by the experts and by the mass of the people. The remedy of the latter is less education. "I tell thee," says Mrs. Perring in 'Seems So,' "if you got to live your life with your nose to the grindstone like most of us has the sooner you learn to put it there the better." The remedy of the former is more education with some change in the curriculum. But (quoting again from 'Seems So') "given good teachers, self-reliance and forethought, the power of thinking can be developed in children on almost any curriculum. What wants altering is the whole spirit of elementary education." Education and environment need to be brought into close relation. The school in fact needs co-ordinating with the home and the instruction in school with the occupation out of school. The growth of the child in the home and in the school cannot be separated, and it is not possible to foster the growth of the complete child without bringing school life and home life into very much closer connection. In rural India perhaps 80 per cent of the boys of school-going age are the sons of agriculturists and all are more or less closely connected with agriculture. It follows that the school and the instruction it gives should be in close touch with agricultural conditions and agricultural

needs. It has been shown how far distant our schools are from this ideal—how the teachers' training is purely literary, how the holidays only partly and in some cases not at all fit in with the times at which agricultural work is most pressing, and how there is no scientific instruction of any kind in the vernacular. Nor is there any co-ordination such as has proved of so much value in America between the agricultural and educational departments. It is pointed out in Chapter III that nearly all the students who reach the end of the primary course go on to a secondary school and the inference is plain that the primary schools are worked for the benefit of that small section of the population which can afford a secondary education and not in the interests of the overwhelming majority of agriculturists who have no need for more than primary education and no chance of obtaining it. It is true that large number of cultivators' sons are to be found in the schools, but the great majority of these abandon their studies after a few months. That this is so in the U. P. can be seen by a comparison of the numbers at any time in preparatory Section A, the lowest class, with those in class I where the lower primary stage begins. It will generally be found that the proportion which those in class I bear to those in A is about 40 per cent. There is a further large shrinkage

before class III marking the upper primary stage is reached, and this means that perhaps 80 per cent of the boys who enter school leave their studies before they know anything of any value to them in after-life. The cause of so many boys leaving early is generally stated to be the inefficiency of the teaching in the lower classes, and the Piggott Committee propose to remedy the defect by collecting large numbers of boys at central schools so that the number in each class should be sufficient to occupy the whole time of one teacher. But, except where population is very dense and central schools proportionately numerous, small boys of seven years of age will not be able to reach the central schools and many, probably the majority, will have to be taught in their own villages as at present. It is true that in some schools the teaching in the lowest class is inefficient and one obvious remedy is to insist on the head teacher taking it himself or at least giving it a large share of his personal attention. But the chief reason why boys are taken away from school so early is that their parents require them, as soon as they are old enough, to take their share of field work and cannot or will not spare them to go to school. Cultivators too look on education simply as training for a literate career and are apprehensive that their boys if kept too long at school will become

unfitted for work in the fields. This attitude is very natural in view of the kind of education actually given and indicates clearly the need for its reform. The remedy surely lies in the adoption of the half-time system in agricultural tracts. Under this system boys, from the highest to the lowest class, attend school only once a day for two to three hours morning or evening. All are at home for the midday meal and before or after that are available to assist their parents. They remain in touch with agricultural operations and in sympathy with their parents' work and interests. Collateral advantages of this system are that over-crowding in schools is avoided, and that fewer boys being present the teacher can give them much more individual attention. Another measure essential to bringing the schools into touch with agriculture is the closing of schools altogether at times when agricultural operations are in full swing and all the available labour is necessary. These times vary from district to district and often from school to school, and a certain minimum of attendances being laid down by superior authority the seasonal vacations and other holidays should be left to a local school committee to settle. As it is in the U. P. we find very short seasonal holidays and the school frequently closed at other seasons, as for instance for ten days after the annual examinations, for another

ten days on account of the teacher having gone to a training centre and on all Muhammadan holidays though there are many schools with no Muhammadan boys. In some districts there are no harvest holidays and village schools are closed in June, a month when agricultural operations are at a standstill.

The need for co-operation between the agricultural and educational departments in the sphere of rural education has been already mentioned. There are several ways in which this might be effected. First small demonstration farms under the control of the Agricultural Department might be started at places where Normal Schools and Training Classes are located. And in both these classes of institutions some practical training in agriculture could be provided. The plots being worked by the students themselves very little expense should be incurred, and some knowledge of the underlying causes of the best farm practices and of the application of scientific methods to agriculture would soon be spread over the length and breadth of the land. Secondly boys' clubs similar to those described in the United States could be formed, though of course individual operations would be on a much smaller scale. Thirdly the department might encourage the formation of school gardens by the distribution of flower and vegetable seeds and of directions for

their use. The planting of trees could also be encouraged in a similar manner. *Fourthly* special classes for instructing school teachers in nature study could be organised. Lastly agricultural schools with a two years' practical course should be attached to the existing experimental stations and demonstration farms of the department for the benefit of boys who have had a fair vernacular education and propose to make their living by agriculture or by teaching in rural schools.

Teachers trained to understand something of nature and of scientific agriculture and to take an interest therein : the handling of seeds and implements by the pupils in the school garden as a preliminary to larger agricultural operations outside school : times and seasons fixed to fit in with the local system of agriculture These seem to be the crying needs of rural education, but since the introduction of half-time is at once the most important of the reforms suggested and that which has obtained the least support some further discussion appears to be desirable. Critics will no doubt say that the whole time of students is already taken up with the present curriculum and that it is impracticable to shorten the school periods at the same time as the new subject (or at least interest) of gardening is introduced.

To this the reply is that in the lower classes at least a great part of the time now spent in the school is wasted, partly indeed because of want of professional training in the teachers (which want is now being remedied by the institution of many new training classes), but partly also because of the impossibility of giving to a large number of boys the individual attention which to the lowest classes at least is most necessary. The time devoted to object-lessons is entirely wasted because teachers ignorant of botany and agriculture cannot teach them intelligently, while the time given to physical drill is possibly not required when the boys are engaged for a portion of the day in agricultural pursuits.

It will also be said that the half-time system has been tried in India and failed and further that the half-timer at home is a by-word among educationists. It is true that the system has been tried in rural India, in the Central Provinces and also it is thought in the Panjab and it is not generally considered to have been successful, but information is wanting as to whether the conditions under which the trial was made were such as to make success possible. If for instance, as was probably the case, there were full-timers in the same school the half-timers would be branded with the mark of social inferiority and would

get very little of the teacher's attention. Since moreover the leading residents of the village want full-time for their own children and care nothing for those in a lower stratum of life, and, since teachers and inspecting officers alike join them in resisting any change by which education may reach a different class to that traditionally entitled to it, it is very difficult indeed to see that the half-time system gets a fair trial. In England the half-time educational system is still in force for boys of 12 and 13 who are only allowed to work half-time in mills and factories. One week they work in the mill in the morning and in the school in the afternoon and *vice versa* in the second week. They are said in the former case to be too tired to attend to their lessons and to be far behind whole-time students in the same schools, as indeed one would expect. The system is generally acceptable to parents who agree with Mrs. Perring's sentiments at the beginning of this chapter and want their children to start earning something as soon as possible, but it is condemned by almost all outsiders on the ground that it deprives the boy of his fair share of the education provided by the State. A new use for the half-time system has however been recently found in America known as the Fitchburg plan, which is said to be rapidly proving of benefit alike to the pupils, the

schools and the employers. Under this system one set of boys or girls spends one week in the school and a following week at work, the second set being at work while the first set is at school and *vice versa*. In advocating a similar system in England a contributor to the Times' Educational Supplement writes as follows:—"The central problem is this: The years from 12 to 16 are the formative years for those passing from childhood to take up life's work. If education is to be worth much it must be given throughout this stage; so all who care about education are reluctant to lose children from the schools before it is over, and many advocate raising the legal leaving age to 16. But those who are concerned that boys and girls should be fitted for the after-work of life know that they need to be trained for its first stages during the same years. When 16 years old it is already too late to give them the tastes and aptitudes so often essential; this should be done at the age of 12. By the time they are 16 school has given a wrong bent, and scores who might have become excellent craftsmen, or learnt to love and understand the land so filling a valuable and happy function in society all their days are turned out of the schools fit only for blind-alley employments during two or three years, or as half-baked clerks in redundant numbers. The problem arises out of the

unalterable facts of life : 12 to 16 are the formative years, and both education and work claim them for the same cogent reasons, nor can either be content to brook denial. What is the solution ?" The solution proposed for England is that while the school age should be raised from 14 to 16 years, during the last four years of school life the pupils should attend school only in alternate weeks, every second week being devoted to the apprentice shop or other employment chosen for the child. It is advocated especially for country boys whom it is important to habituate early to life on the land.

This particular solution does not appear to fit the seasonal requirements of a wholly agricultural country, but is quoted here in order to show how the principle of half-time schooling is accepted, even when the circumstances makes its adoption most difficult. There is no such difficulty in applying it to Indian rural tracts. What needs to be emphasised is that for a boy who is to earn his bread by physical labour the best preparation is not what one may call the life of the professional school-boy.

In consonance with the accepted policy of 'breaking down illiteracy' the aim of the Educational Department at present is to get as many boys as possible up to the upper primary standard, and, since

it is expected that most boys will be taken away as soon as they reach the age at which their services will be useful in the fields, the attempt is to be made to pass them through the six primary standards in the shortest possible time. Now a boy of good intelligence who goes to school at the age of six or seven is expected to pass the upper primary examination at the age of eleven or twelve. And the result of the present policy is that boys will be filled with all the book learning that the school can put into them in five years of childhood and will be cast off for good at this very immature age.

If indeed the pressure of economic conditions is so strong or the demand for primary education so weak that no part of a boy's time after the age of eleven or twelve can be spared for the school, then we should surely pause to consider whether the time is yet ripe for the introduction of a system of general primary education into rural areas. It is a question whether we are not beginning at the wrong end and whether primary education can make any real advance before there is a substantial improvement in economic conditions. A similar problem has recently come to the front in the backward Southern States of the U. S. A. The Rockefeller Educational Board looking round for means of assisting *education* and

finding that adequate development could not take place till the available resources of the people were greatly enlarged set about the improvement of *agriculture* by means of demonstration farms and with this object has spread them, in consultation with the Agricultural Department, over a great portion of the Southern States with, it is said, wonderfully successful results. By this indirect method interest in agricultural and other education has been stimulated and the economic capacity to take advantage of the educational facilities provided has been immensely increased.

The improvement in economic conditions depends here, as in the Southern American States, most directly on the activities of the Agricultural Department. The extension of demonstration farms teaching their lessons of improved seeds, processes and implements : the organisation of a supply of good seed : the local utilisation of those fertilising media, such as bones and oil-seeds, which are now exported and lost to the country, are some of the most obvious needs, and the expansion of agricultural education on the lines already set out is equally necessary. But there are many other branches of the administration in which much can be done towards the raising of the status of the agriculturist. The extension of the co-operative movement for the supply of cheap credit, the

